

Application No. 09/701,261
Response filed on August 13, 2003

REMARKS

1. Correction To Specification

An amendment has been made to the specification at page 8 to correct the unit of porosity as suggested by the Examiner.

2. Prior Art Rejection

Claims 24-42 and 46-47 have been rejected under 35 USC 103 over Gill et al. (U.S. Patent 4,892,590). This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

2.1 The Examiner's rejection is improper as a matter of law.

Applicants first of all submit that the Examiner's rejection based upon only the Gill et al. reference is improper as a matter of law under 35 USC 103, because the reference admittedly does not teach all of the elements of Applicants' claimed invention, and the Examiner does not point to any other teaching in any other prior art which would motivate one skilled in the art to modify the process described by Gill et al. to arrive at the presently claimed process.

The present invention is directed to a process for regulating the porosity and printing properties of uncoated wood-containing paper, by utilizing colloidal precipitated calcium carbonate (PCC) having a defined BET surface area. As even recognized by the Examiner in the Office Action, "Gill et al. are silent with respect to the use of wood-containing pulp" (emphasis added). The Examiner does not then point to any other prior art reference to even attempt to provide a basis for suggesting that it would be obvious to modify the Gill et al. teaching in this respect. Rather, the Examiner without any basis simply urges that "one of ordinary skill in the art would have a reasonable expectation of success" if the Gill et al. process were modified to be utilized with wood-containing paper as in the present invention. But an unsupported mere allegation that the modification of a prior art teaching to reach the claimed invention would be a "design choice" has been soundly rejected as an inappropriate rejection under 35 USC 103. See *In re Chu*, 26 USPQ 1089 (Fed. Cert. 1995). The Examiner's prior art rejection is simply fundamentally flawed when the only cited reference admittedly fails to teach one of Applicants'

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claimed elements. See *In re Gal*, 25 USPQ 2D 1076 (Fed. Cert. 1992) (finding of "obvious design choice" precluded where the claim structure and the function it performs are different from the prior art).

2.2 One skilled in the art would not be motivated to utilize the teachings of Gill et al. in a completely different technical field.

Applicants also submit that the technical fields of Gill et al. and the present invention are completely different within paper manufacturing, so that one skilled in the art would not arrive at the present invention by reading Gill et al.

As noted above, the present invention is directed to regulating the porosity and printing properties of uncoated wood-containing paper using colloidal PCC. Gill et al., on the other hand, is directed to a paper making process comprising chemical pulp (i.e. uncoated wood-free paper) produced by the so-called kraft process (see column 5, lines 8-11) to which is added a retention agent comprising the combination of colloidal PCC and cationic starch. As such, the purpose of colloidal PCC in Gill et al. is far different from the use of colloidal PCC in the present invention. Applicants submit that there are well-accepted commercial and technical distinctions between paper manufacturing fields utilizing wood-containing paper and those utilizing chemical pulp, such that, one skilled in the art would not be motivated by the teachings of Gill et al. to utilize colloidal PCC as presently claimed, nor would one skilled in the art have any reasonable expectation that the use of colloidal PCC as in the present invention would provide the desired regulation of porosity and printing properties of uncoated wood-containing paper.

It is well known that wood-containing paper comprises lignin and is characterized by exhibiting a relatively good opacity, good printability and a lower basis weight, which suits this type of paper for, e.g., mass-publications. Wood-containing paper is, however, prone to yellowing when exposed to UV radiation. Furthermore, SC-papers are used as publication papers, where the properties in printing technologies, like offset printing and rotogravure printing, are of great importance. The permeation of printing ink into the paper must, therefore, be controlled, so the proper paper porosity is of prime importance for the printing properties.

Chemical pulp, on the other hand, characteristically comprises only trace or no amount of lignin. Papers based on chemical pulp exhibit a good strength, high brightness and good archival

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characteristics, and such papers exhibit a higher basis weight as compared to the wood-containing paper. Papers based on chemical pulps (wood-free paper) are "sized" with water repellant chemicals to control the water absorption properties, because the water absorption must be controlled to provide desirable writing and ink-jet properties. The effect of these sizing chemicals is known to be hampered by pigments comprising a high surface area.

These differences in physical properties between wood-containing paper and chemical paper, e.g. basis weight and strength, means that there are inherent differences also in porosity and morphology. Because of these differences in morphology between wood-containing pulp versus chemical pulp, a person skilled in the art would recognize that the different morphologies would require different techniques for regulating porosity. These technical differences are so different that those skilled in the art would regard "wood-containing pulp" and "chemical pulp" as two completely different technical domains within the field of paper manufacturing.

As such, one skilled in the art reading Gill et al. would not be motivated to arrive at the present invention, namely process for regulating the porosity and printing properties of uncoated wood-containing paper by means of defined colloidal PCC. In particular, Applicants submit that the present invention would not be obvious to one skilled in the art because:

- a) one skilled in the art would know that the technical differences between paper based on chemical pulps and wood-containing paper are significant;
- b) one skilled in the art would have no basis to expect that colloidal PCC which is utilized in chemical pulp paper as a retention agent would work as a porosity controlling agent in a technically different paper-type, namely wood-containing paper; and
- c) one skilled in the art would not have any reasonable expectation of success if that person attempted to utilize colloidal PCC to regulate porosity of uncoated wood-containing paper.

The Examiner's use of the Gil et al. reference amounts to a suggestion that it would be obvious to try using colloidal PCC in a wood-containing paper process. But a long line of cases make it clear the "obvious to try" is not the proper standard of obviousness under 35 USC 103. *In re Duel*, 34 USPQ2d 1210 (Fed. Cir. 1995); *In re O'Farrell*, 7 USPQ2d 1673, 1682-8 (Fed. Cir. 1988).

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In view of the above, Applicants submit that Gill et al. cannot properly be considered to render the present invention obvious under 35 USC 103, so that, the Examiner's rejection should be withdrawn.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Leonard R. Svensson (Reg. No. 30,330) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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